

99-181

EXAMINER'S

COPY 1937

Div. 63

474,396

426/104

RECORDED

## PATENT SPECIFICATION

Application Date: April 30, 1936. No. 12348/36.

Complete Specification Left: April 20, 1937.

Complete Specification Accepted: Nov. 1, 1937.



### PROVISIONAL SPECIFICATION

#### Improvements in and relating to the Packaging of Food Products

I, WILLIAM WARREN TRIGGS, of 57 & 58, Lincoln's Inn Fields, London, W.C.2, a British subject, do hereby declare the nature of this invention (a communication from abroad by Continental Patent Corporation, a corporation organized and existing under the laws of the State of Delaware, United States of America, of Chicago, Illinois, United States of America) to be as follows:—

This invention relates to the packaging of food products and particularly to a food container and a method of producing same.

15 An object of the invention is to provide a food container adapted to preserve its contents free from contamination by the atmosphere.

20 A further object of the invention is to provide a container of attractive and/or natural appearance.

25 According to the invention the food container comprises a citrus fruit hull, that is, a citrus fruit with its soft centre or pulp removed, which is rendered impermeable to air and is provided with an opening for the insertion of a food product and a cap or plug for sealing the opening.

30 The cap or plug may be formed from the portion of the rind or peel of the citrus fruit which has been removed to provide the filling opening, or of the rind or peel of other citrus fruits.

35 The container may be produced in the following manner. An opening is made in a citrus fruit, for example, a citron, lemon, orange, lime, grapefruit,

tangerine or mandarin, by removing a portion of the rind or peel thereof, and the fruit is rendered hollow by the extraction of the soft centre or pulp, or a portion thereof. The resulting shell or hull is rendered impermeable to air by impregnation with a suitable material in solution, such as sugar solution, heated or otherwise, which may be applied by immersion, and a removable plug or cap of any suitable material, or the removed portion of the rind or peel, is provided for insertion in the opening to seal the same.

The container may be filled with liquid, semi-liquid, plastic or solid food products and, where the food products are capable of being rendered more or less liquid under heat, these may advantageously be inserted in the container by pouring. In certain instances it may be desirable to sterilize or pasteurize the filling either before or after introduction thereof into the hull.

The container being constituted of a material which is rendered airtight, its filling, which may be of a perishable nature, will be efficiently preserved after sealing of the container by the plug or cap.

It will be appreciated that the citreous hull may be utilized purely as a container or receptacle for the food product or under certain treatment, such as a crystallizing treatment, it may itself be edible together with its contents.

Dated this 30th day of April, 1936.

MARKS & CLERK.

### COMPLETE SPECIFICATION

#### Improvements in and relating to the Packaging of Food Products

75 I, WILLIAM WARREN TRIGGS, of the firm of Marks & Clerk, of 57 & 58, Lincoln's Inn Fields, London, W.C.2, a British subject, do hereby declare the nature of this invention (a communication to me from abroad by Continental Patent Corporation, a corporation organized and existing under the laws of the State of Delaware, United States of America, of Chicago, State of Illinois, United States of America) and in what

[Price 1/-]

manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the packaging of food products and particularly to food containers and method of preparing the same.

It has been found that in a number of citrus fruit states and countries, where citrus fruits are raised, a large quantity of these are wasted because it is im-

practicable and almost impossible to ship glass or other containers into the states to contain the citrus fruits either in a preserved or other form. The

5 reason for this is the high tariff and high railroad rates, which preclude any commercial shipment particularly of glass containers into a citrus fruit state. This is particularly true of the State of  
10 Florida, where a large quantity of citrus fruits of various kinds, such as oranges, grapefruit, and citron is being wasted annually.

The object of this invention is to  
15 utilize the hull or outer skin of the citrus fruits as a container for a food product, preferably some form of marmalade or preserves made from the citrus fruit itself, or the fruit juice. Where the  
20 citrus fruits are packed and shipped in their natural state, they do not keep satisfactorily, and become decayed and unfit for use after some considerable period of time. However, by preserving the fruit  
25 or edible interior thereof, or extracting the juice therefrom, these may be sealed up in the hull or outer portion of the citrus fruit, which otherwise would be wasted, and the latter portion after beat-  
30 ing it to prevent decay is used as the container for the preserved or conserved inner portion of the fruit, in this way eliminating the necessity of using any additional containers such as glass or  
35 metal for the preserved fruit, and greatly decreasing the cost of transportation and preparing the same for market.

In the accompanying drawings:

40 Fig. 1 is a side elevation of the fruit in its natural state;

Fig. 2 is a perspective view showing the first step of the process with the fruit cut in half;

45 Fig. 3 is a similar view after the interior of the fruit has been removed, and the hull filled with a preserved or other form of food product;

Fig. 4 is a sectional view through the complete fruit container;

50 Fig. 5 is a similar view of a modified form of container; and

Fig. 6 is a perspective view of a further modification thereof.

55 For the purpose of illustration, the invention is described in connection with citrus fruit, such as oranges or grapefruit, which is shown in Fig. 1, and designated generally by the numeral 1. This orange is cut into two halves 2 along the line 3, approximately at the center thereof, preferably, although it is possible to cut off only the upper portion 12 in Fig. 6 and use that as a cap for the container. The edible inner portion 4  
65 of the fruit is removed, and some form

of edible food product 5 is packed into the hull or skin of the fruit to fill each of the two halves 2. This food product 5 may be of the edible interior portion of the fruit after it has been conserved or  
70 preserved, so as to avoid the possibility of its becoming decayed. The outer hull or skin of the fruit is preserved also before the preserved food product is packed therein, so as to render the  
75 article edible. After the food product or preserved contents are packed into the portions of the hull or skin, the two portions are placed together, as shown in Fig. 4, and are sealed along their cut  
80 edges 3 by means of sealing-wax, paraffin, or some other sealing substance designated generally by the numeral 6. This renders the container formed by the hull or skin of the fruit entirely air tight, enclosing the preserves or other food products contained therein in an air-tight condition, where it will be kept in a proper state to prevent its deterioration through the action of the elements. This forms a container for the food product, which is as effective in maintaining the same in its preserved condition as either glass or metal containers usually employed.

95 For the purpose of transportation, the fruit container may be enclosed in a paper cover 7 which passes entirely around the same, and may be hermetically sealed, being of a character such as to  
100 permit this, and thus further insure maintaining the container perfectly air-tight.

After having been carefully sealed, the fruit container may be packed in any  
105 form of box or other container for the same, as, for instance, in the crates ordinarily employed to ship such fruit in its natural condition. In this way there is no probability of breaking the container for the preserved or other food products contained therein, and there is no probability of destruction of the container through the breakage, as exists where the containers are of glass, and this also facilitates the easy handling and packing of the containers as well as decreasing the cost of transportation.

Whenever it is desired to open the container to use the contents, it is only required that the paper cover 7 be removed and a knife or other sharp object may be used to break the seal at 6 between the two halves, and the latter may be thus opened and the halves used as dishes to contain the marmalade, etc. If the peeling or hull of the citrus fruit has been conserved in any well-known manner, such as by the usual sugar solutions or the like, the hull may also be eaten.  
130

In the modified form shown in Fig. 5, each half of the container after having been filled with the preserved or other food product, is sealed by paraffin, cardboard or other form of seal which covers the open top of the same, which seals are designated generally by the numeral 8 in Fig. 5, and the two halves may then be placed together with the seals face to face and enclosed in the paper covering 7 as before.

If the hull or skin of the fruit is not conserved, in order to prevent decay and deterioration of the contents by reason thereof, the hull is coated at least on its inner surface, but it may be coated on both its inner and outer surfaces with paraffin, rubber, or other substance designated generally by the numeral 9. This outside coating may also serve the same purpose as the paper covering 7, which may thus be eliminated or omitted.

The containers formed by the hull or skin of the fruit may be used to contain in any form of food product, but they are particularly valuable for containing and receiving the preserved edible interior portion of the fruit, since the latter will be removed to form the containers, and may be used to fill the same after having been properly treated or preserved.

On the other hand, however, the juice of the fruit may be extracted from the interior pulp, and after removal of the latter the skin or hull may be closed in the manner above described, and a small opening formed in one side through which the juice is inserted, a suitable plug or other member being used to close the opening, but being removable for the insertion of a straw to extract the contents.

It is to be understood that the term "conserved" is used herein as applied to preserving the hull of the fruit to render it edible such as by treatment in sugar solution; whereas the term "pre-

served" is applied broadly to preserving in any manner.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A food container comprising a hull of natural fruit having a hollow interior adapted to be filled and sealed, said hull having the walls thereof preserved against decay and having an opening for the introduction of products, and means for closing and sealing said opening.

2. A food container according to claim 1, characterized by having the walls of the hull conserved and air-tight.

3. A food container according to claims 1 and 2, characterized by having a conserved portion of the hull forming a cap for the opening and sealed thereto.

4. A food container according to claim 1, characterized by having the opening substantially smaller in diameter than the diameter of the hull, and having a cap fitted and sealed thereto.

5. A food container according to claim 1, characterized by having the walls of the hull coated inside and outside preserving said walls against decay.

6. A process of forming a food container from a hull of natural fruit according to claim 1, characterized by opening a portion of the hull, removing the interior portion of the fruit, preserving the hull to render it edible and approximately air-tight, filling the hull with a food product, and capping and sealing the opening in the hull.

7. A food container and method of preparing the same substantially as described and set forth in the accompanying drawing.

Dated the 20th day of April, 1937.

MARKS & CLERK.

**THIS PAGE BLANK (USPTO)**

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

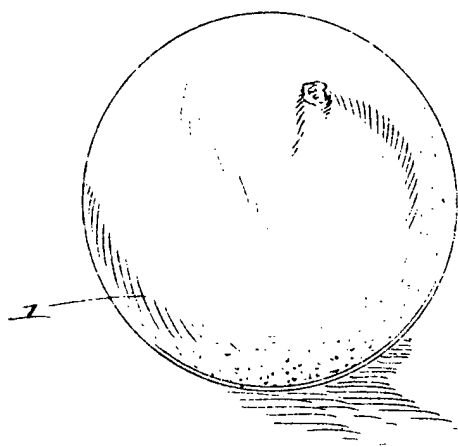


Fig. 2.

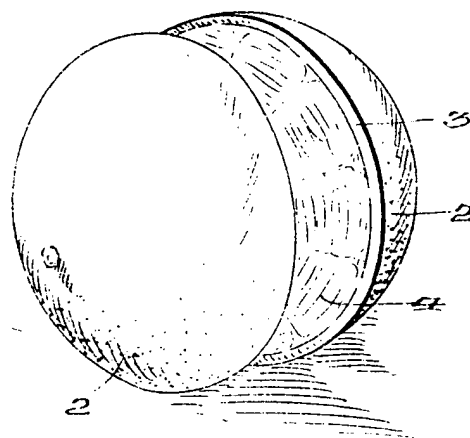


Fig. 3.

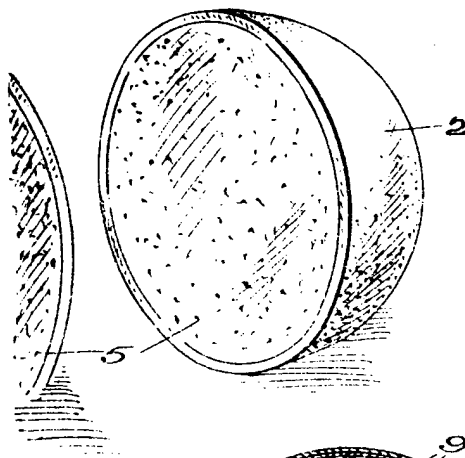


Fig. 4.

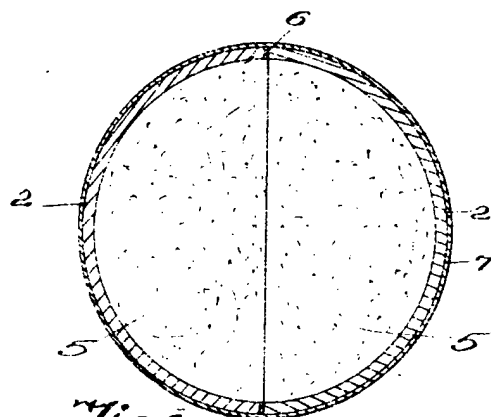


Fig. 5.

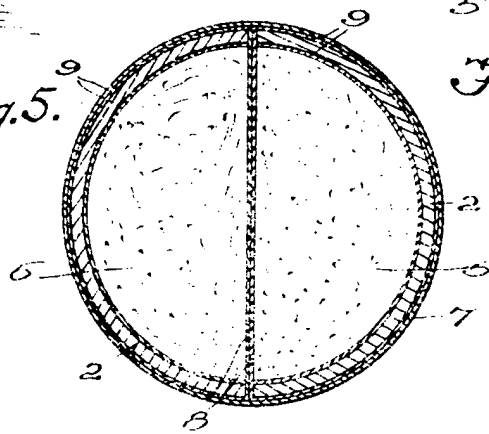
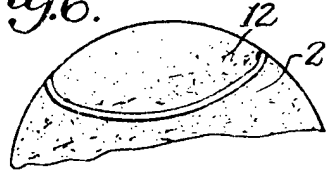


Fig. 6.



**THIS PAGE BLANK (USPTO)**